

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07C319/04 B01J23/28 C07C321/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07C B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|--------------------------------|
| P,X | DATABASE WPI Section Ch, Week 200501 Derwent Publications Ltd., London, GB; Class E17, AN 2005-000391 XP002322026 & CN 1 528 516 A (UNIV XIAMEN) 15 September 2004 (2004-09-15) abstract ----- -/-- | 1-3,5-7, 10-15, 19-21,23 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

23 March 2005

Date of mailing of the international search report

17. 05. 05

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; 26 June 2003 (2003-06-26), WANG, QI ET AL: "The study of the promotion of Co to the supported catalyst K ₂ MoO ₄ for the syntheses of methanethiol from H ₂ S-containing syngas" XP002322025 retrieved from STN Database accession no. 139:8947 | 1-4, 13-17, 27 |
| Y | abstract | 5, 19-21, 25 |
| Y | & XIAMEN DAXUE XUEBAO, ZIRAN KEXUEBAN , 42(1), 64-68 CODEN: HMHHAF; ISSN: 0438-0479, 2003, ----- Y-Q. YANG ET AL: "Study of the supported K ₂ MoO ₄ catalyst for methanethiol synthesis by one step from high H ₂ S-containing syngas" CATALYSIS LETTERS, vol. 74, no. 3-4, 2001, pages 221-225, XP002322024 page 221 ----- | 5, 19-21, 25 |
| A | DATABASE WPI Section Ch, Week 200508 Derwent Publications Ltd., London, GB; Class E17, AN 1999-303319 XP002322027 & CN 1 072 523 C (UNIV XIAMEN) 10 October 2001 (2001-10-10) cited in the application abstract | 1-32 |
| A | ----- GB 2 016 468 A (PENNWALT CORP) 26 September 1979 (1979-09-26) the whole document | 1-32 |
| A | ----- US 4 665 242 A (BOULINGUIEZ ET AL) 12 May 1987 (1987-05-12) cited in the application the whole document ----- | 1-32 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/010872

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-32

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-32

Continuous process for the manufacture of methymercaptane over a preformed catalyst comprising an active component of Mo-O-K-based species and an active promoter

2. claims: 33-37

Process for the preparation of a solid catalyst

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/010872

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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